



## **BENZENE (C<sub>6</sub>H<sub>6</sub>)**

- Agent information:** Benzene (benzol, coal tar naphtha, phenyl hydride, and cyclohexatriene) is a highly volatile and flammable liquid industrial chemical. It has the potential to cause mass casualties. As a vapor, benzene is heavier than air and may accumulate in low-lying areas. Benzene's sweet aroma generally provides adequate warning of hazardous concentrations for acute exposure.
- Route of exposure:** Benzene is absorbed rapidly and extensively after inhalation and ingestion. It is absorbed less extensively through intact skin; however, percutaneous absorption may contribute to total body burden.
- Signs and symptoms:** Signs and symptoms vary, depending on the route and level of exposure. Benzene is mildly irritating to the skin, eyes, and respiratory tract. Benzene may cause central nervous system depression and arrhythmias to acutely exposed persons. Long-term exposure to benzene may cause anemia, alterations to the immune system, and leukemia. The effects of acute exposure to high concentrations of benzene (neurological, dermal, respiratory, and gastrointestinal) are evident immediately after exposure.
- Protective measures:** Persons exposed only to benzene vapor do not pose substantial risks of secondary contamination to others. Persons whose clothing or skin is contaminated with liquid benzene can cause secondary contamination by direct contact or through off-gassing vapor. Personal Protective Equipment (PPE) includes hooded Powered Air Purifying Respirator, chemical-resistant suit, gloves, and boots.
- Evaluation:** Serum (red / black top tube), whole blood (purple top tube), and urine samples.
- Prophylaxis:** Wear appropriate PPE to avoid secondary contamination.

**Emergency Medical Services and Preparedness Section**  
**24/7 Emergency Contact Number: 1-888-295-5156**  
**Contact Number: 302-223-2999**

Revised: 02/2023  
Page 1 of 2



- Treatment:** There is no specific antidote for benzene, just supportive care. If ingested, consider gastric lavage with activated charcoal. For liquid exposures, decontaminate with soap and water. Treatment consists of supporting respiratory, cardiovascular, and neurological functions. Attempt to minimize the victim's excitation, since excessive catecholamine can induce life-threatening arrhythmias due to benzene's myocardium sensitizing effect. Administer benzodiazepines for seizures.
- Reporting:** Report suspect cases immediately to the Division of Public Health, 1-888-295-5156 (24/7 coverage).
- For more information:** Visit the Centers for Disease Control and Prevention website: <https://emergency.cdc.gov/>.